ABSTRACT

The present invention concerns a fuel reformer for reforming a hydrocarbon base fuel into a hydrogen rich gas, the fuel reformer of claim 1, wherein at least a part of material composing the reformer is a material containing at least Cr, Ni, Si, made of Cr 15 to 25 mass %, Ni 8 to 35 mass %, Si 2 to 4 mass % and the remaining ingredients of Fe and inevitable impurities (C, Mn, P, S or others) provides the sigma brittleness resistance and the cementation resistance at the same time, and also a light weight, low cost and cheap price, high reliability, and long life, the fuel reformer of claim 2 of the present invention wherein at least a part of material composing the reformer is a material containing at least Cr, Ni, Si, Nb, and made of Cr 15 to 25 mass %, Ni 8 to 35 mass %, Si 2 to 4 mass %, Nb 0.05 to 1 mass % and the remaining ingredients include Fe and inevitable impurities (C, Mn, P, S or others), provides improved oxidation resistance, cementation resistance and intergranular corrosion resistance, and also further increased reliability, and durable years.